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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,981	03/06/2002	Giovanni Fortuna	54804.010100	6416

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EXAMINER

PHAN, THIEM D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 12/23/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,981

Applicant(s)

FORTUNA, GIOVANNI

Examiner

Tim Phan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 8 and 13-17 is/are rejected.
- 7) ☒ Claim(s) 2-7 and 9-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-17 drawn to a method of making a self-locking knot in a stator lacing machine, classified in class 29, subclass 596.
- II. Claims 18 and 19 drawn to an apparatus of making a self-locking knot in a stator lacing machine, classified in class 29, subclass 732.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be processed by hand.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

3. A telephone call was made to Eugene C. Rzucidlo (212-801-2100) on 7/21/02 to request an oral election to the above restriction requirement and a provisional election was made with traverse to prosecute the invention of Group I, claims 1-17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 18 and 19 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Title

4. The following title is suggested: "A Method Of Knotting An End Lacing Terminal".

Specification

5. The disclosure is objected to because of the following informalities:

- On page 8, lines 2 and 4, after "Figure", "1" is inserted therefor;
- On page 9, line 24, before "Figures", "all" is inserted therefor.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Frederick (US 4,614,161) hereinafter '161.

The '161 teaches a method of securing the stator coil lacing cord used for wrapping a generally toroidal coil (Cf. Fig. 8, element 18) of a dynamoelectric machine, by means of a lacing apparatus of the type comprising cord supply means (Cf. Fig. 8, element 32), a lacing needle having a hook-shaped extremity (Cf. Fig. 8, element 42) and capable of rotating around its axis (Cf. Fig. 3, element 82) as well as moving radially (Cf. Fig. 3, element 64; column 4, lines 40-43) and axially (Cf. Fig. 8, element 78; column 4, lines 43-46) relatively to said coil for engaging said coil and pulling it radially in order to form interlaced lacing rings wrapping said coil, and means for rotating said coil around its axis by turntable (Cf. Fig. 1, element 12; column 3, lines 8-10) in synchronism with the movements of said needle, comprising:

- forming, upon completion of a lacing phase, a plurality of knotting rings in a chain-like arrangement (Cf. Fig. 11, element 7) on said end lacing terminal, by making the cord pass each time through a previously formed knotting ring or through a last-formed lacing ring, respectively, when a first knotting ring is being formed; and
- cutting the last knotting ring (Cf. Fig. 12, elements 56 and 10; column 5, lines 67 and 68); wherein said forming step comprises, during the formation of each knotting ring, pulling the cord (Cf. Fig. 12, elements 48 & 9; column 5, lines 61-65) to such an extent that said last-formed lacing ring and respectively each knotting ring preceding a last knotting ring in the chain are individually closed on the knotting ring being formed, whereby a chain of knot lockups forming a self-locking knot is obtained.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 8, 13/8, 14/8, 15/14/8, 16/8 and 17/8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '161.

As applied to claim 8, the '161 teaches the claimed invention which reads on applicant's claimed limitations, including:

- once finished the lacing phase by means of a last radial movement of the needle from the inside of the coil (Cf. Fig. 9, element 1; column 5, lines 35 & 36) toward the outside to form said last lacing ring, separating the synchronism between the rotation movement of the coil and the movement of the needle (Cf. column 5, lines 32-34) and stopping the rotation of said coil in order to start the cord securing (Cf. column 5, lines 26-28);
- driving the needle in a first radial movement toward the inside of the coil (Cf. Fig. 10, element 6; column 5, lines 50 & 51) along a path equivalent to the needle path during said last radial movement, but in opposite direction;
- hooking the cord (Cf. Fig. 10, element 32), supplied by said cord supplying means, by means of the hook-shaped extremity of said needle;

- driving the needle, with the cord engaged in its hook-shaped extremity, in a first radial movement toward the outside of the coil (Cf. Fig. 11, element 7; column 5, lines 51-53), along a path equivalent to the needle path during said first radial movement toward the inside, but in opposite direction, pulling the cord into said twisted last lacing ring, causing its closing into a first knot lockup and forming a first knotting ring; and
- executing a cut by burning off the end of the last knotting ring (Cf. Fig. 12, elements 56 & 10; column 5, lines 50 & 51) and pulling the cord for extracting the free extremity, obtaining consequently a self-locking knot, except for driving the needle in a first rotation around its own axis, to form a first torsion in said last lacing ring and obtain a twisted last lacing ring;

It would have been obvious to one of ordinary skill in the art at the time the invention was made to drive the needle in a first rotation around its own axis, to form a first torsion in said last lacing ring and obtain a twisted last lacing ring since it was known in the art that the needle is provided with an axis rotation mechanism (Cf. Fig. 3, element 82, column 4, lines 36 & 37) and the securing knot in Figure 11 can be realized only by the additional rotating movement of the needle through the loops of lacing cord (Cf. Fig. 11, element 32).

As applied to claim 13/8, the '161 teaches that the needle after being pulled outside of the coil (Cf. Fig. 9, element 2), performs a downward motion (Cf. Fig. 9, element 4) , rotates in its own axis in order to insert the cord in opening 20 (Cf. Fig. 9, element 20; column 5, lines 41-43) and performs a raised position (Cf. Fig. 9, element 5).

As applied to claim 14/8, the '161 teaches the driving of the needle in a radial movement toward the inside of the coil passing through the last knotting ring (Cf. Fig. 9, element 1) and the hooking of the cord by a harpoon (Cf. Fig. 4, element 44) shaped perpendicularly to the needle as the cord passes under the needle and is retracted to lock the cord in the knot.

As applied to claims 15/14 and 15/14/8, the '161 teaches that at the end of the lacing cycle, the lacing cord is repositioned to work on a new stator (Cf. column 1, lines 64-68).

As applied to claim 16/8, the '161 teaches that the cord cutting is performed by electrical heated cutter (Cf. Fig. 12, element 56; column 3, lines 66-68).

As applied to claim 17/8, the '161 teaches that the cord supply means is engage by a cord clamp (Cf. Fig. 12, element 36; column 5, lines 57-59) in order to maintain the cord tight during the knotting.

Allowable Subject Matter

10. Claims 2-7, 14/2, 15/14, 15/2, 16/2, 17/2, 9, 10, 11, 12, 13/9 and 13/12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 703-605-0707. The examiner can normally be reached on Monday - Friday, 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter VO can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.



Tim Phan
Examiner
Art Unit 3729



CARL J. ARBES
PRIMARY EXAMINER

tp
December 12, 2003